

# Digital Shopaholics: Patterns of Purchases, Products, and Buying Prices by Chinese and American College Students

Senior Research Thesis

Presented in partial fulfillment of the requirements for graduation *with Honor Research  
Distinction in Marketing* in Fisher College of Business of The Ohio State University

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## Abstract

With the development of new technologies, more and more people choose to use the Internet for shopping instead of shopping in brick and mortar stores. In my research, I compare the self-reported shopping behavior of consumers from China now living in the USA with the self-reported shopping behavior of consumers who were raised in the USA. The majority of self-reported purchases included products such as books, groceries, and electronic devices. Payment methods included credit cards, debit cards and Paypal. I used surveys and focus groups to collect my data. In addition to comparing my original data (over 200 participants) from the different groups directly, I also make comparisons with secondary data (from research firms and publicly available databases). My analyses include comparisons of the Chinese consumers and American consumers with similar demographics. In general, the research findings reveal an interesting mix of influences on the behavior and preferences of Chinese students from traditional Chinese backgrounds

now living in the USA. Compared to traditional Chinese consumers, Chinese students living in US are very active in using deal websites and in using credit cards when shopping. Compared to American college students, Chinese students in the USA use more deal websites when shopping online. This research may provide important insights for online retailers as well as banks providing credit cards for college students. The research findings may also provide insights as to why some college students tend to overspend when using credit cards.

## Acknowledgements

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## Field of Study

Major Field: Business

Finance, Marketing & Economics

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## Introduction

In the past, financial services were generally sold or acquired at bank branches; but consumers today can bank online, on their smartphones or tablets - never setting foot in a retail bank. In this high tech world, how does the younger consumer (Gen Y) prefer to bank? Are they more apt to bank via mobile devices? Are they less inclined to visit the branch? Are they specifically seeking out financial service providers that cater to their mobile lifestyle?

With the development of new technology, there are more and more people who choose to use Internet for shopping instead of shopping in brick and mortar stores. This shopping behavior is different across cultures. My research mainly focuses on Asians living in US, specifically I focus on the Chinese population living in United States. The Asian population has been growing rapidly in United States and they are highly active in shopping. They shop variety of products such as books, groceries, and electronic devices online and their payment methods are credit cards, debit cards and PayPal.

## Exploratory Research: Websites used for Online Shopping

**Chinese:** [Taobao.com](http://Taobao.com)

When it comes to Chinese e-commerce, Taobao is the first name that always jumps to mind, and with good reason. Taobao sells almost literally anything you can imagine. It can be a bit of a rough-and-tumble place, with fakes and forgeries aplenty, but for those willing to brave the waters, Taobao offers more deals on more products than anyone else, and that's why it's China's biggest e-commerce platform (1). Taobao is an everything store. It sells everything from sunglasses to cars.

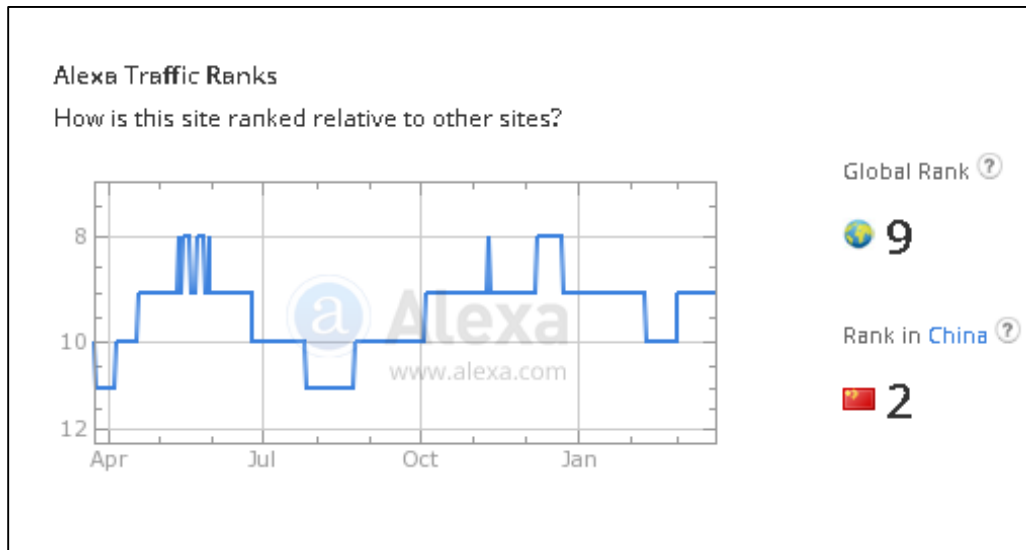


Figure 1. “How popular is taobao.com?”

With around 760 million product listings as of March 2015, Taobao Marketplace is one of the world’s top 20 most visited websites according to Alexa (2).

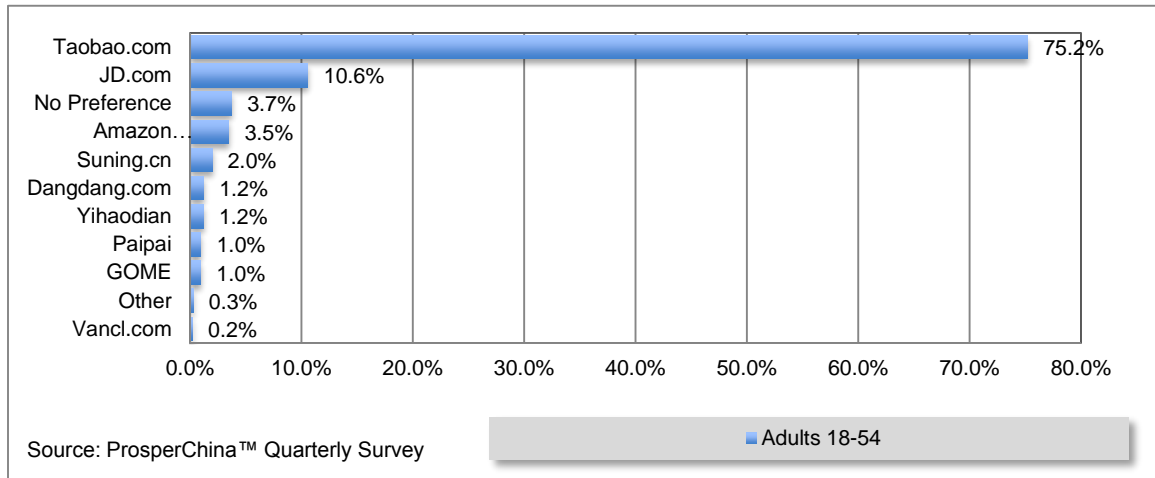


Figure 2. Website used Most Often by Chinese for Buying Products

According to ProsperChina™ Quarterly Survey, 75.2% Chinese choose Taobao as their most often used website for online shopping (3). Sellers are able to post new and used goods for sale or resale on the Taobao Marketplace either through a fixed price or by auction. The overwhelming majority of the products on the Taobao Marketplace are brand new merchandise sold at a fixed price, while auctions merely make up a very small percentage of transactions. Buyers can assess seller backgrounds by information available on the site, including ratings, comments and complaints. Taobao users usually spend time to read feedback and compare items of one shop with those of others.

Given common fears about being cheated online, Taobao also has its own online payment platform, called Alipay. Alipay is the preferred payment solution for transactions on Taobao Marketplace. It is the most widely used third-party online payment solution in China (4). To ensure safe transactions, Alipay uses an escrow system through which payment is only released to the seller when the buyer has received his or her goods in satisfactory condition. Alipay somewhat resembles PayPal. According to the Alibaba Group web site, Alipay partners with multiple financial institutions as well as Visa and MasterCard to facilitate payments in China and abroad, so no financial card is required for online shopping sprees (5).

Right now, Taobao has not only Chinese consumers but also overseas customers. From 2012 onwards, Taobao began to accept international Visa and MasterCard credit cards. That means it is possible for overseas customers shopping via Taobao. But a disadvantage of Taobao overseas shopping is the shipping. The shipping fee is really high; almost \$100 per kg, and also the shipping duration is really long. Items might take 7-40

working days to reach the consumer. Sometimes items have problems when they are checked by government customs.



Figure 3. Taobao Webpage

American: [Amazon.com](https://www.amazon.com)

Amazon is the largest Internet-based retailer in the United States (6). Amazon product lines include medias (books, DVDs, music CDs, software, videotapes, and

software), apparel, baby products, consumer electronics, beauty products, gourmet food, groceries, health and personal-care items, industrial & scientific supplies, kitchen items, jewelry and watches, lawn and garden items, musical instruments, sporting goods, tools, automotive items and toys & games. Similar to Taobao, Amazon allows users to review and rate products on a rating scale from one to five stars. Customers can also indicate whether a review is helpful or not. In 2010, Amazon was reported as being the largest single source of Internet consumer reviews (8). One big difference between Amazon and Taobao is that almost 95% of Taobao sellers are third-party sellers, but for Amazon its third-party sellers are only 40%. Over the 2000-2010 decade, Amazon has developed a customer base of around 30 million people.

A lot of online shoppers use Amazon Prime for shipping convenience. Amazon Prime is a membership offering free two-day shipping within the contiguous United States on all eligible purchases for a flat annual fee of \$79 (7).

Amazon has separate retail websites for United States, United Kingdom & Ireland,



France, Canada, Germany, The Netherlands, Italy, Spain, Australia, Brazil, Japan, China, India and Mexico. Amazon also offers international shipping to certain other countries for some of its products. In China, Amazon China is limited to only an online book store. It does not have any other product lines. Because of limited product lines, Amazon China is not very popular in China. It's even not a competitor of Taobao.



Figure 4. Amazon Webpage

## Chinese Living in US: [Dealmoon.com](http://Dealmoon.com)

There are a lot of shopping websites. But how to figure out which shopping websites give the best deal? Dealmoon helps you figure out that problem. Dealmoon is a coupon resource website, a shopping guide, collects deals, coupons, discount, and gift card on clothing, shoes, apparel, beauty, jewelry, watch, handbags, and electronics for women, men, babies, and kids (10). Different from Amazon and Taobao, it does not contain true products, it collects deals of different shopping sites and brands, and then it posts the deals and promotions on Dealmoon.com to make sure customers buy products with the lowest price. Because of the plenty of shopping websites, the market is becoming more and more competitive. Dealmoon can help people compare prices on different sites, and even compare the prices of retail stores and online stores. It is harder for sellers to have a monopoly because consumers have more information.

Dealmoon is very popular among Chinese living in US. Dealmoon is actually co-founded by several Chinese who are originally from China, and living in US for

couple years. So they really know what Chinese living in the US want. One of the biggest features of Taobao is that the price is super low. Dealmoon follows this feature. By collecting and comparing prices of different shopping websites, it recommends the cheapest price deal to customers. By promoting deals, Dealmoon helps increase sales of other shopping websites, such as Amazon. People tend to pay more attention when there is a promotion. But sometimes people make the purchase just because there is a promotion, even they don't need the product.

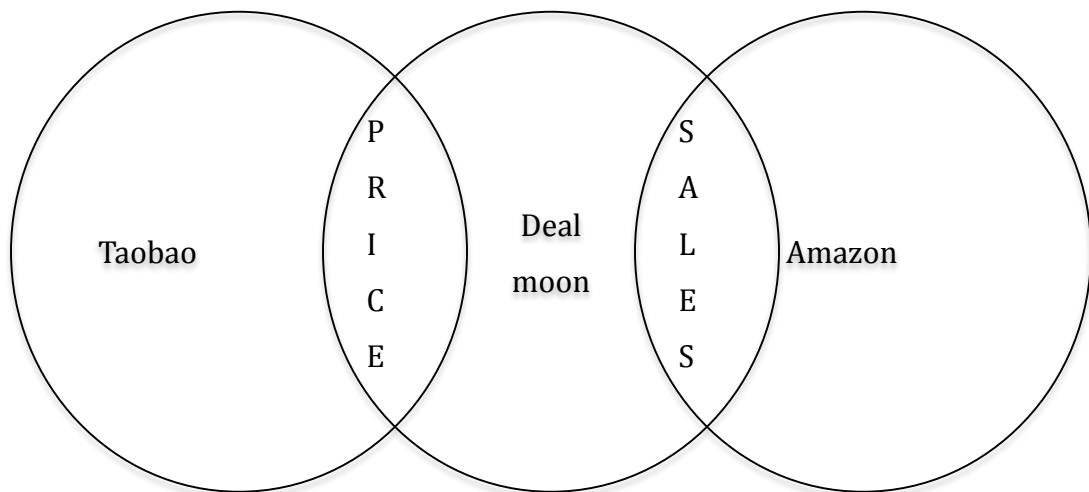


Figure 5. Relationship between Taobao, Dealmoon, and Amazon

Dealmoon is the biggest shopping advisory site for Chinese-Americans living in the United States. Currently, there are over 5 million visits each month. Dealmoon also has over 1.2 million social network fans that are looking for shopping advice (9). In order to better serve Chinese, Dealmoon also launched a Chinese version, and collects deals especially popular among Chinese, such as some luxury brands deals. Also, Dealmoon has a Chinese forum for selling and buying used products for Chinese living in the US. This feature is also popular among a lot of Chinese college students living in the US. Because for some Chinese college students, they only study and stay in US for a few years. It's impossible for them to bring all their belongings back to China. Dealmoon Chinese forum is a good platform for them to sell these belongings. They can sell things to other Chinese who are also living in the US. They can post in Chinese and talk and negotiate with them in Chinese. Dealmoon also has its own app. The app helps people shop via smart phones easily and conveniently. Consumers can comment on the deals through Dealmoon as well. They can "like" or "dislike" deals.

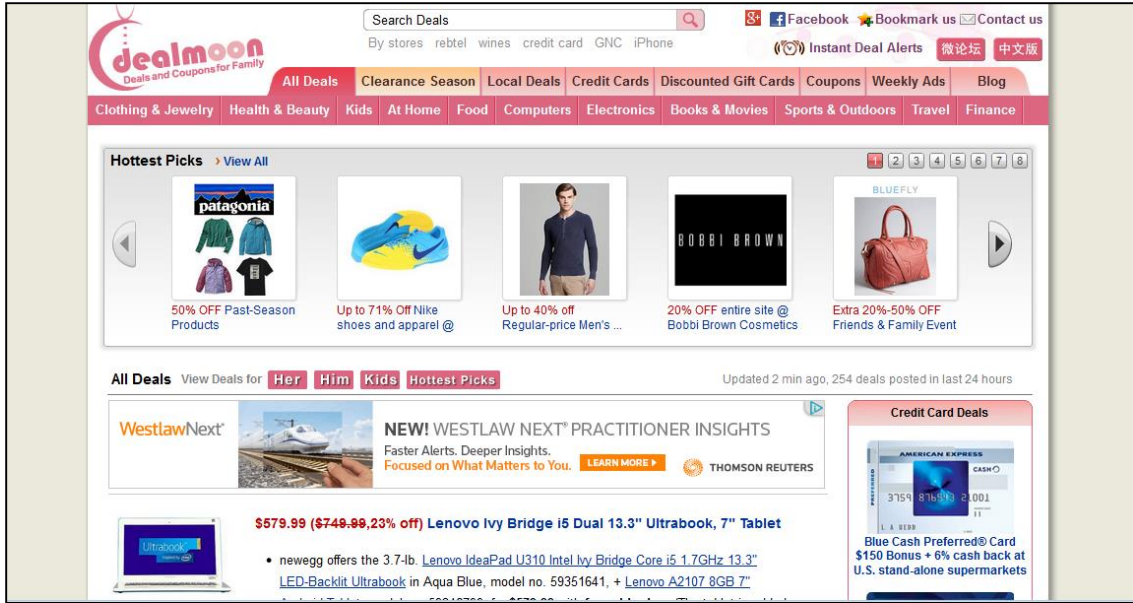


Figure 6. Dealmoon Webpage

	Taobao	Amazon	Dealmoon
URL	<a href="http://taobao.com">taobao.com</a>	<a href="http://amazon.com">amazon.com</a>	<a href="http://dealmoon.com">dealmoon.com</a>
Population	Chinese	American	Chinese living in the US
Major Service	E-commerce	E-commerce	Coupon Website
Founded Year	1999	1994	2009
International Shopping	Yes	Yes	N/A
Rating/Comment	Yes	Yes	Yes
Payment Method	Alipay/Credit Card	Paypal/Credit Card	N/A
Sellers	95% 3rd party	40% 3rd Party	N/A
Feature	Cheap	Amazon Prime	Chinese Forum

Table 1. Comparison between Taobao, Dealmoon and Amazon

### Qualitative Research: Focus Group

There were 8 participants involved in the focus group. They all are 20-25 years old (3 males, 5 females) . They all are Chinese studying and living in USA. All of participants use online shopping. Most of the participants reported shopping online more than 3 times per month and spending around \$350 to \$450 per month. Only one of the participants reported shopping online once per 3 months.

They browse shopping websites almost every day. The participants said they tend to pay more attention when there is a promotion, and some of them make the purchase just because there is a promotion, even without the need for the product. The promotion websites participants browse are: DealMoon (dealmoon.com), 6pm (6pm.com), and Dealam (dealam.com). Since my research participants all are Chinese studying and living in USA, they prefer Chinese version of deal websites.

Participants prefer buying books, groceries and electronic devices online. On the

other hand, because some participants want fresh food they do not buy food online. With regarding to clothing, because they want to try clothes and shoes to make sure size and style fit they do not buy them online.

They also talked about the advantages of online shopping, such like more choices, competitive prices, rebates and frequency of promotions. But there are also some disadvantages of online shopping, such as the return policy, lost packages and long waiting times. Compared to online shopping, shopping at retail stores can let customers see the actual products, customers can get the products right away, and return policies tend to be easier and faster.

Most of the participants will choose online banking when they shop online. They think online banking is safe, fast and convenience. Several of them have experiences of stolen credit card information. They said the security and the convenience of online banking are related to the bank customer service. But there is also a disadvantage of online banking, some of the websites will remember your card information when you

paid online, and they will charge you member fee automatically without confirming with you. There is another payment method called receive and then pay. It is when you receive the products then you pay the money to the delivery person, which they will be in charge of collecting the money. This payment method is less risky, but it is a little inconvenient because customers have to wait at home for the delivery. They have to give cash to the delivery person face to face. If you paying online, you do not need to wait at home, and the delivery person only needs to drop off the package. All of the participants use PayPal. They think PayPal is really convenient. They do not need to reenter their billing and shipping information every time and there is no restriction of credit card type. They can link either US credit/debit card or international credit/debit card to your PayPal account.



No.	Last Name	First Name	Phone Number
1	Chen	Shuo	203-997-2049
2	Ge	Saiying	614-404-2312
3	Guo	Yunqian	614-512-4182
4	Hu	Diwen	614-271-5240
5	Jiao	Jiao	614-753-8068
6	Lin	Yiyang	614-747-5041
7	Tan	Danpeng	614-397-3110
8	Tian	Yafei	614-377-1917

Table 2. Focus Group Participants

## Quantitative Research: Survey

I conducted a survey to compare consumer behavior between Chinese college students living in United States and American college students in online shopping and off-line shopping. I used the information and opinions generated from the focus group to determine questions for the survey. I collected data from college students about their online shopping purchasing behavior. Through the survey I asked questions about the popular shopping websites, such as Amazon and eBay, and some online payment methods, like credit cards, debit cards and PayPal. In addition, I analyzed the difference between online shopping and retail store shopping and the advantages and disadvantages of online banking. From analyzing the survey, I am able to make recommendations regarding shopping behavior and paying methods. I also identify future trends in mobile banking.

## Questionnaire

**What is your gender?**

- ☐ Female
- ☐ Male

**How old are you ?**

- ☐ 16-18
- ☐ 19-21
- ☐ 22-24
- ☐ 25-27

**How long have you been living in the United States?**

- ☐ 0-1 year
- ☐ 2-3 years
- ☐ 4-5 years
- ☐ Over 5 years

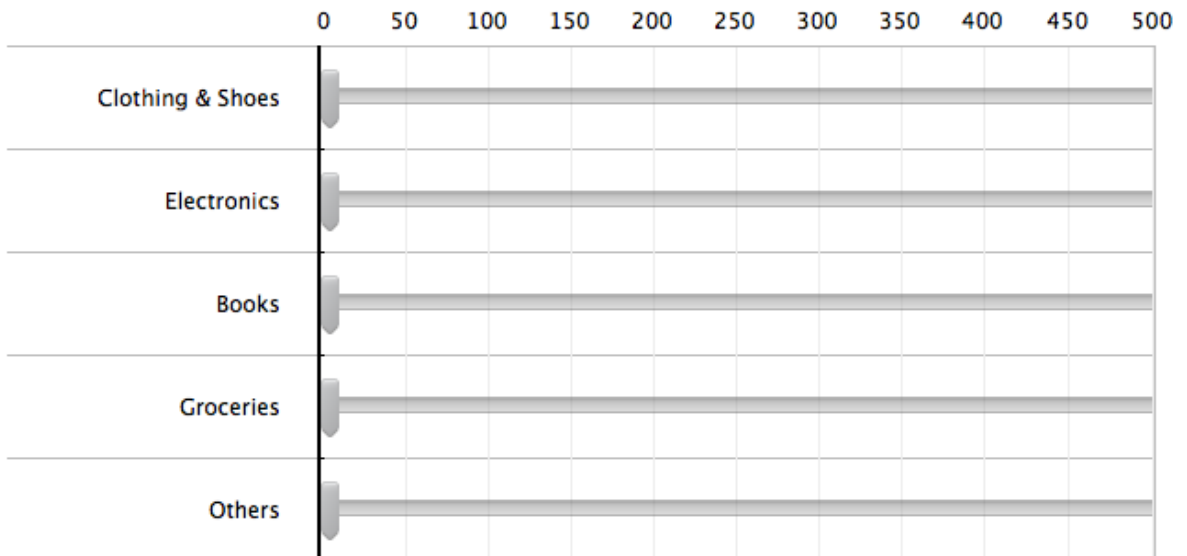
**How many times do you shop online each month?**

- ☐ 0
- ☐ 1-3 times
- ☐ 4-6 times
- ☐ over 6 times

How much do you typically spend on online shopping each month?

- ☐ \$0
- ☐ \$1-\$150
- ☐ \$151-\$300
- ☐ \$301-\$450
- ☐ \$451-\$600
- ☐ Over \$600

How much (\$) do you spend on the following types of products through online shopping each month?



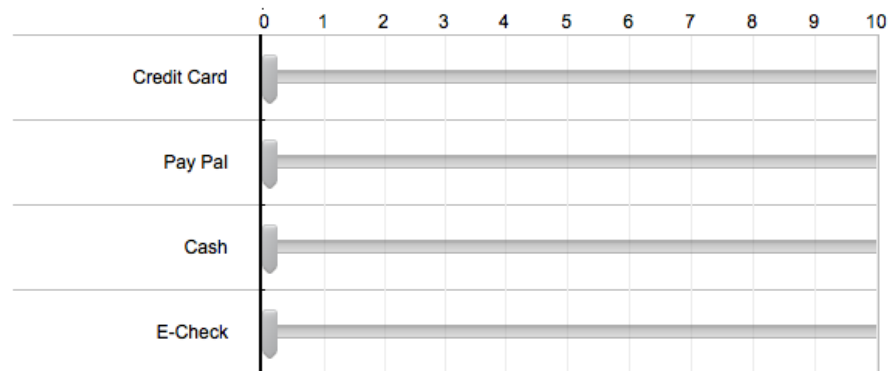
How would you rank the advantages of using online shopping in your opinion? (From 1 to 4, 1 is the best; 4 is the worst)

Convenience	1
Comparing Price	2
Review of products	3
More choices of products	4

How would you rank the disadvantages of using online shopping in your opinion? ((From 1 to 5, 1 is the worst; 5 is the best)

Customer Service	1
Return Policy	2
Product Quality	3
Price and Time of shipping	4
Security of your personal information	5

How often do you use these following payment methods while shopping online? (0: NOT AT ALL 10: VERY MUCH)



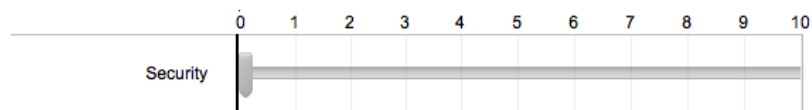
What bank do you use for online shopping the most?

- ☐ Chase Bank
- ☐ PNC Bank
- ☐ Fifth Third Bank
- ☐ Huntington
- ☐ Other

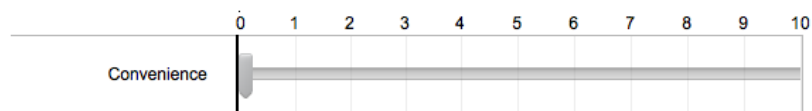
What is the most important reason that you choose the bank for online shopping?

- ☐ Rewards (Cash Back)
- ☐ Security
- ☐ Convenience
- ☐ Ease of access

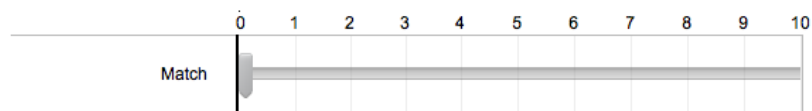
How do you feel about the security of paying online?



How do you feel about the convenience of paying online?



How does the product you get from online shopping match you expectation?



What device do you use the most when you shop online?

- ☐ Computer (Laptop)
  - ☐ Tablets
  - ☐ Smart phone
  - ☐ Others
-

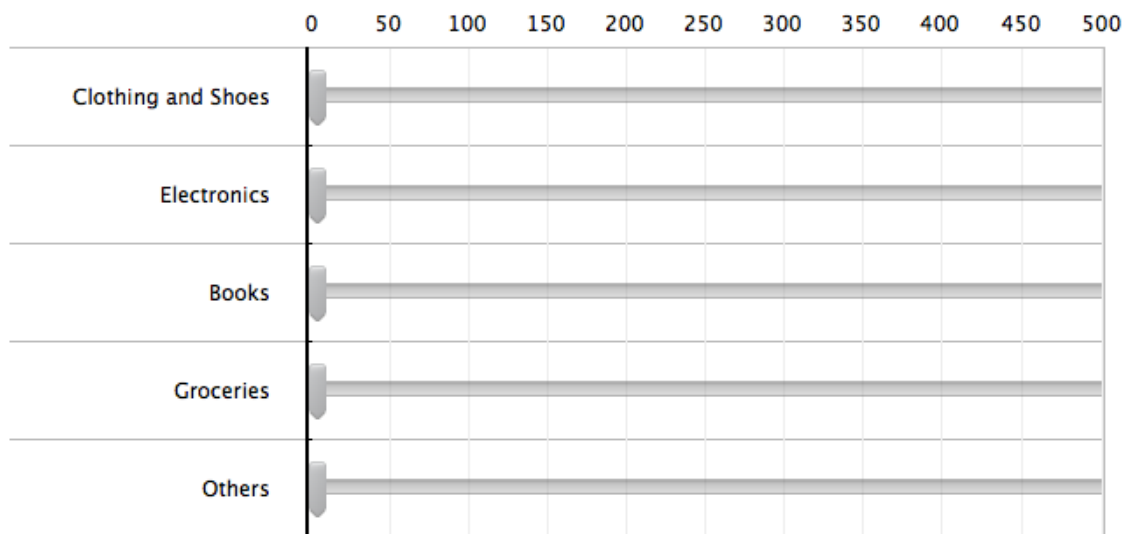
How many times do you shop in retail stores (non-online) each month?

- ☐ 0
- ☐ 1-3 times
- ☐ 4-6 times
- ☐ Over 6 times

How much do you typically spend on retail stores (non-online) each month?

- ☐ \$0
- ☐ \$1-\$150
- ☐ \$151-\$300
- ☐ \$301-\$450
- ☐ \$451-\$600
- ☐ Over \$600

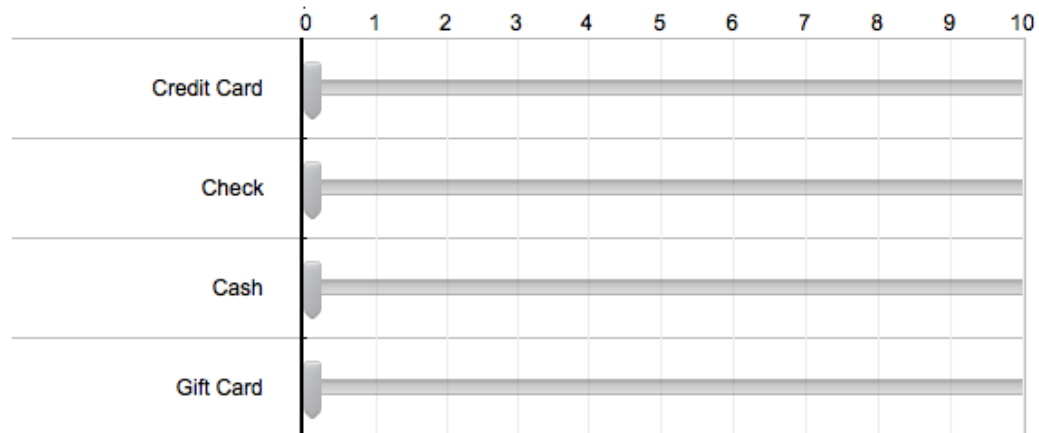
How much (\$) do you spend on the following types of products through retail stores (non-online) each month?



How would you rank the advantages of shopping in retail stores (non-online) in your opinion? (From 1 to 4, 1 is the best; 4 is the worst)

Convenience	1
Return Policy	2
Measurements	3
Physically try it on	4

How often do you use these following payment methods while shop in retail store (non-online)? (0: NOT AT ALL 10: VERY MUCH)





### Conclusive Research: Hypothesis Test

Because I was interested in a comparison of shopping behavior between Chinese college students living in the US and American college students, I sent the survey to both Chinese and American Students. 106 Chinese college students living in the US, and 102 American Students participated in my survey. 64% of our participants are female, and 36% of our participants are male. 60% of our participants range from 18 to 20 years old, 31% of our participants range from 21 to 23 years old, while 9% of our participants range from 24 to 26 years old.

#### **Hypothesis Test 1**

**Ho:** Frequency of online shopping is not related to number of years the Chinese respondents have lived in US.

**Ha:** Frequency of online shopping is related to number of years the Chinese respondents have lived in US.

		How long have you been living in the United States?				Total
		0-1 year	2-3 years	4-5 years	Over 5 years	
How many times do you shop online each month?	0	1	0	3	0	4
	1-3 times	14	38	9	2	63
	4-6 times	9	10	3	2	24
	over 6 times	2	7	1	1	11
	Total	26	55	16	5	102

		How long have you been living in the United States?
How many times do you shop online each month?	Chi Square	16.41*
	Degrees of Freedom	9
	p-value	0.06

*\*Note: The Chi-Square approximation may be inaccurate - expected frequency less than 5.*

Table 3. Relationship between frequency of online shopping and number of years the respondents is living in US

Since the p-value (0.06) is less than 0.1 (I set our  $\alpha$ -significance level as 0.1), I reject the null hypothesis and conclude that frequency of online shopping is related to number of years the respondents living in US. These data indicates that the longer the Chinese students stay in US, the more times they do online shopping every month.

## Hypothesis Test 2 (paired sample T-test)

**H<sub>0</sub>:** Chinese college students' spending on online shopping is more than or equal to spending on off-line shopping

**H<sub>a</sub>:** Chinese college students' spending on online shopping is less than spending on off-line shopping

Paired Samples Test										
		Paired Differences					t	df	Sig. (2-tailed)	Sig. (1-tailed)
		Mean	Std. Deviation	Std. Error Mean	Interval of the					
					Lower	Upper				
Pair 1	How much do you typically spend on online shopping each month? - How much do you typically spend on retail stores (non-online) each month?	-.176	1.155	.114	-.403	.050	-1.543	101	.126	.063

Table 4. Spending for Chinese college students living in the US through online shopping and spending through retail stores

Since the p-value (0.063) is less than 0.1 (I set our  $\alpha$ -significance level as 0.1), I reject the null hypothesis and conclude that Chinese college students living in the US spending on online shopping is less than spending on off-line shopping.

### Hypothesis Test 3 (paired sample T-test):

**H<sub>0</sub>:** American College students' spending on online shopping is more than or equal to spending on off-line shopping

**H<sub>a</sub>:** American college students' spending on online shopping is less than spending on off-line shopping

Paired Samples Test									
	Paired Differences								
	Mean	Std. Deviation	Std. Error Mean	Interval of the		t	df	Sig. (2-tailed)	Sig. (1-tailed)
				Lower	Upper				
Pair 1 How much do you typically spend on online shopping each month? - How much do you typically spend on retail stores (non-online) each month?	-0.121	1.232	0.013	-0.138	0.25	-0.892	102	0.243	0.122

Table 5. Spending for American college students through online shopping and spending through retail stores

Since the p-value (0.122) is larger than 0.1 (we set our  $\alpha$ -significance level as 0.1), I do not reject the null hypothesis and conclude that American college students' spending on online shopping is kind of equal to spending on off-line shopping.

**Hypothesis Test 4 (paired sample T-test):**

**H<sub>0</sub>:** Spending for Chinese college students living in the US on groceries through online shopping and spending on groceries through retail stores are equal. (same for clothing & shoes, electronics, and books)

**H<sub>a</sub>:** Spending for Chinese college students living in the US on groceries through online shopping and spending on groceries through retail stores are not equal. (same for clothing & shoes, electronics, and books)

Paired Samples Test									
		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	Interval of the				
					Lower	Upper			
Pair 1	How much (\$) do you spend on the following types of products through online shopping each month?-Clothing & Shoes - How much (\$) do you spend on the following types of products through retail stores (non-online) each...-Clothing and Shoes	-16.58442	105.65091	12.04004	-40.56423	7.39540	-1.377	76	.172
Pair 2	How much (\$) do you spend on the following types of products through online shopping each month?-Electronics - How much (\$) do you spend on the following types of products through retail stores (non-online) each...-Electronics	-18.34483	80.93263	15.02881	-49.12995	12.44030	-1.221	28	.232
Pair 3	How much (\$) do you spend on the following types of products through online shopping each month?-Books - How much (\$) do you spend on the following types of products through retail stores (non-online) each...-Books	-29.12903	115.78737	20.79603	-71.60018	13.34212	-1.401	30	.172
Pair 4	How much (\$) do you spend on the following types of products through online shopping each month?-Groceries - How much (\$) do you spend on the following types of products through retail stores (non-online) each...-Groceries	-98.42857	127.01952	18.14565	#####	-61.94431	-5.424	48	.000

Table 6. Shopping on different categories through online and retail stores for Chinese

college students living in the US

Since the spending on groceries' p-value (0) is less than 0.05 ( $\alpha$ -significance level ),

we reject the null hypothesis and conclude that spending for Chinese college students

living in the US on groceries through online shopping and spending on groceries through retail stores are not equal.

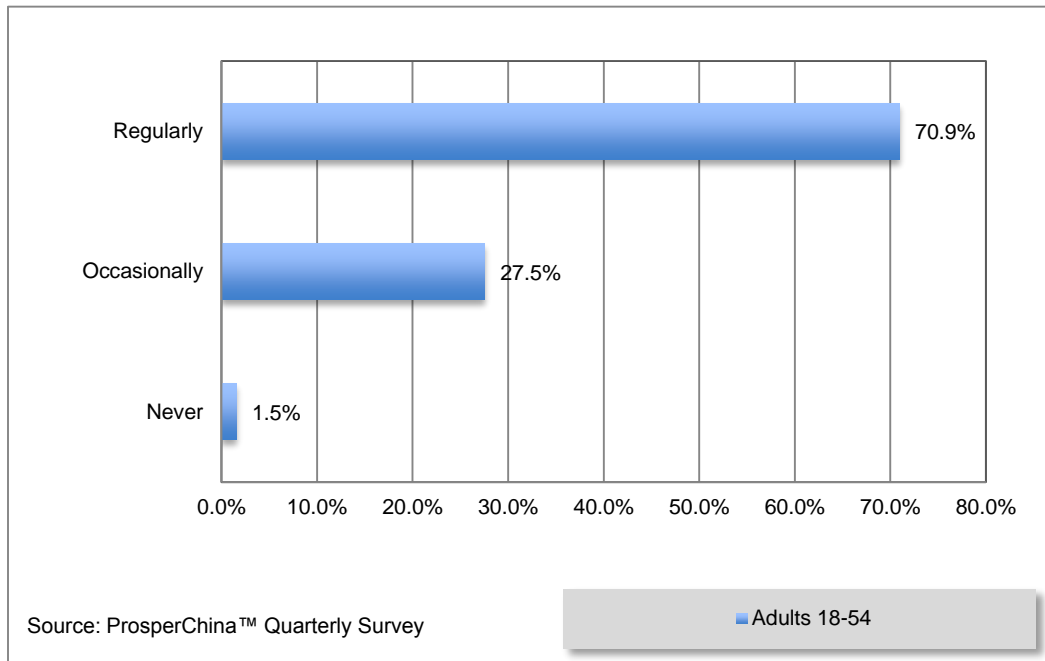


Figure 7. Purchase Products Online

In China, these days, online shopping has become more and more popular.

According to ProsperChina™ Quarterly Survey, 70.9% Chinese reported they shop online regularly, and 27.5% Chinese do online shopping occasionally (3).

The online shopping trend undoubtedly affects retailers' sales. Due to Kantar's data, four of China's largest retail groups had lost shoppers as more people chose to buy from e-commerce channels. Shoppers visited brick and mortar retailers less often than before (11).

	More Shoppers?	Higher Value Baskets?	More Trips?
Sun Art Group	+1.7%	92 yuan +4.9%	4.4 trips -0.2%
Walmart Group	-5.7%	91 yuan +6.4%	3.5 trips -1.1%
Vanguard Group	-3.4%	83 yuan +3.4%	4.8 trips -3.1%
Carrefour Group	-4.7%	88 yuan +2.3%	3.4 trips -3.1%
Bailian Group	-4.7%	84 yuan +6.8%	4.9 trips +0.7%
Source: <a href="#">Kantar Worldpanel</a>			

Table. 7 Kantar Worldpanel



Walmart (-5.7%), Vanguard (-3.4%), Carrefour (-4.7%) and Bailian (-4.7%) groups all had fewer shoppers than a year ago. The fact that major retailers failed to keep or expand shoppers reflected a difficult trading environment. According to Kantar's Data, Chinese retailers are facing increasing pressure from e-commerce websites. E-commerce will grow fastest in China as Kantar Worldpanel has forecast its sales value will grow by 75% from current value by 2016 (11).

Conclusive Research: Comparative Analysis

**Comparison 1: Shopping for Chinese college students living in the US through  
online shopping vs. Retail Stores**



Figure 8. Shopping for Chinese college students living in the US through online shopping  
vs. Retail Stores

Chinese students living in the US on average spent \$450.48 in online shopping every month, and spent \$656.23 in retail stores shopping. They spend more in retail stores shopping than online shopping. From Figure 8, it can be noted that Chinese college students living in the US spend more money in retail stores than on online shopping in all the categories. That means today, Chinese college students living in the US still prefer shopping in retail stores.

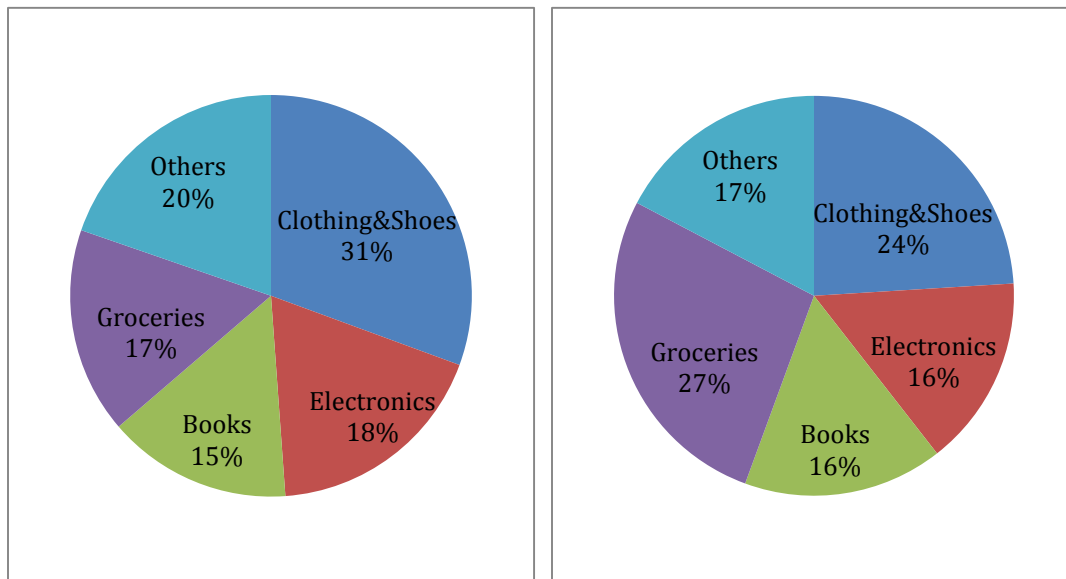


Figure 9. Shopping categories for Chinese college students living in the US through online shopping (left) vs. Retail Stores (right)

Through online shopping Chinese college students living in the US spend most on clothing and shoes that is 31% of their total spending in online shopping. On average, they spend \$137.84 shop online for clothing and shoes. Through retail stores Chinese college students living in the US spend most on groceries that is 27% of their total spending in retail stores. On average, they spend \$177.83 shop in retail stores for groceries.

## Comparison 2: Shopping for American students through online vs. Retail Stores

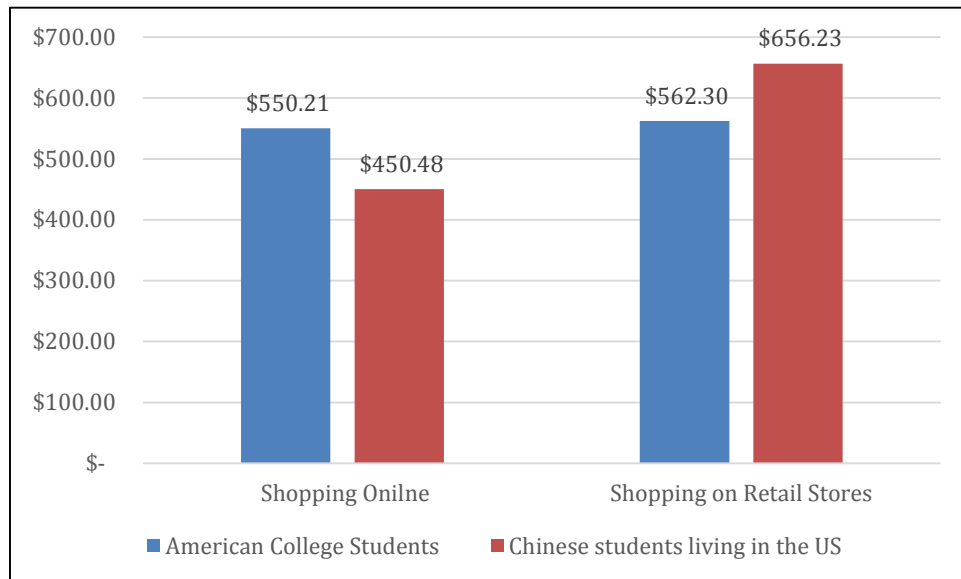


Figure 10. Shopping for Chinese students living in the US and American college students through online shopping vs. Retail Stores

For American college students, their spending through retail stores and online shopping is similar. They on average spent \$550.21 in online shopping every month, and spent \$562.30 in retail stores shopping. Compared to American students, Chinese students living in the US still do more shopping in retail stores than online.

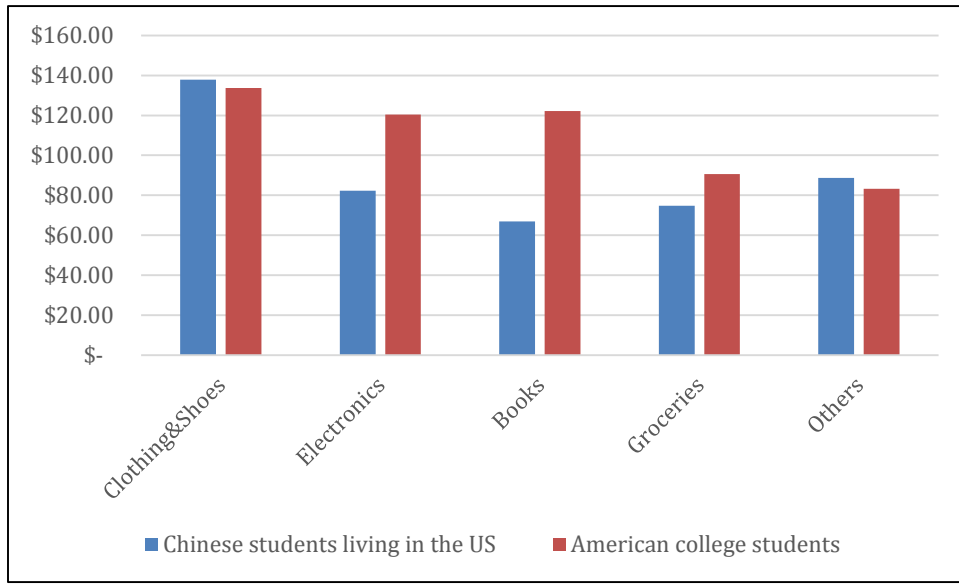


Figure 11. Spending on online shopping for Chinese students living in the US vs.

American college students

Compare to Chinese students living in the US, American college students shop online more for electronics, books and groceries.

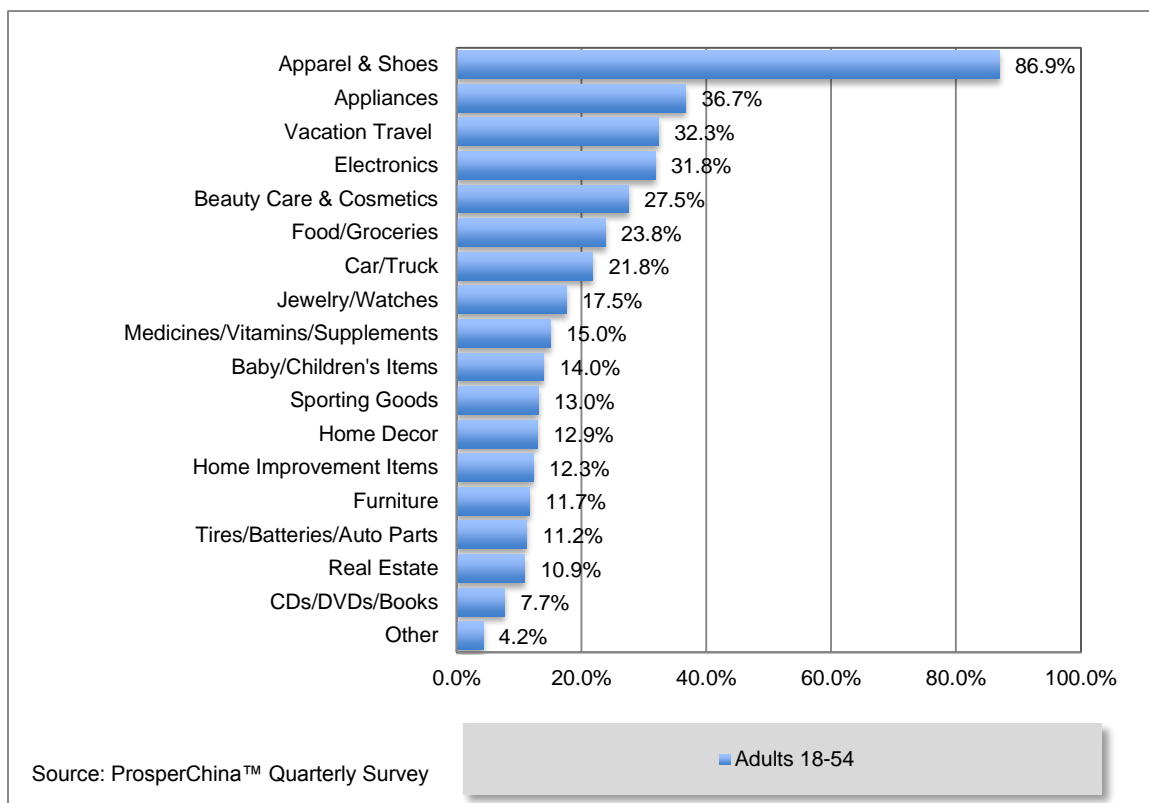


Figure 12. Products Chinese bought online

According to ProsperChina™ Quarterly Survey, 86.9% Chinese shop online for Apparel and shoes, 31.8% Chinese shop online for electronics, 23.8% shop online for groceries, and only 7.7% Chinese reported shopping online for books (3).

Chinese students living in the US are more active shopping online for electronics, groceries and books than Chinese, but less active than American college students.

**Comparison 3: Advantages of shopping online vs shopping in retail stores for Chinese college students living in the US**

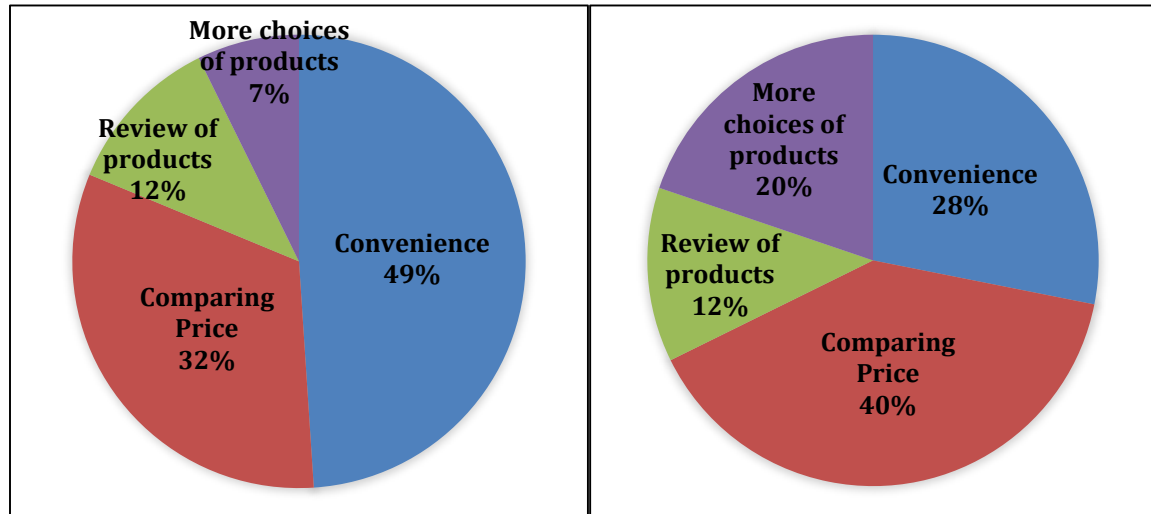


Figure 13. 1<sup>st</sup> important advantage (right) & 2<sup>nd</sup> important advantage (left) of shopping online for Chinese college students living in the US

49% Chinese college students living in the US chose “convenience” as the most important factor. 40% of them choose “comparing price” as the second important factor.



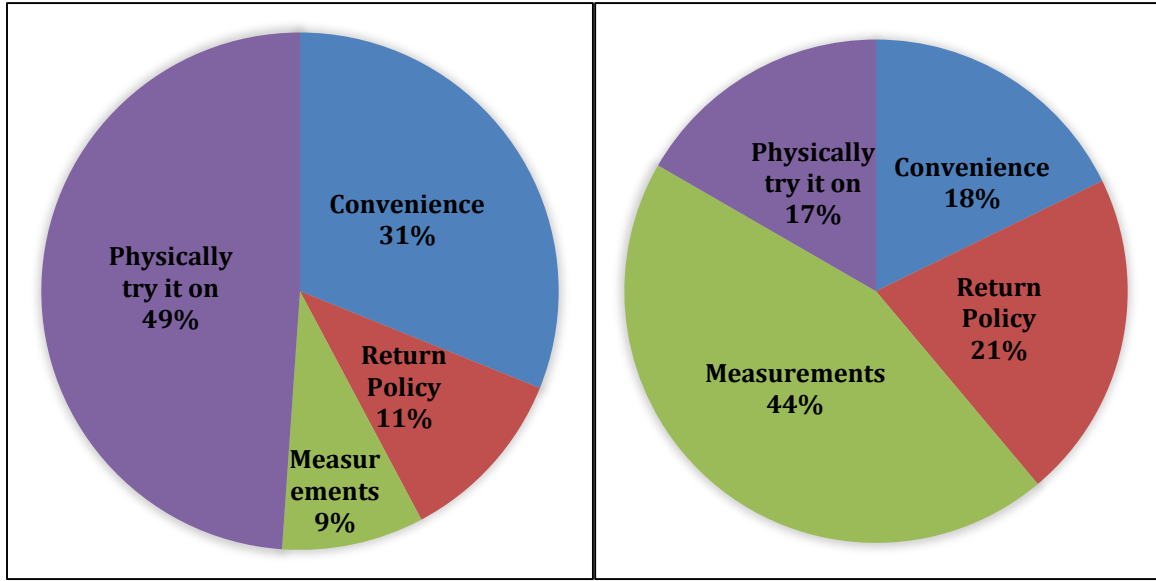


Figure 14. 1<sup>st</sup> important advantage (right) & 2<sup>nd</sup> important advantage (left) of shopping in retail stores for Chinese college students living in the US

49% Chinese college students living in the US chose “physically try it on” as the most important advantage of shopping in retail store. 40% of them chose “measurement” as the second important advantage of shopping in retail stores.

## Insights & Opportunities: Online Payment

Mobile banking is growing rapidly, especially as the younger generations who conduct most activities online and on mobile every day. As Fox states, “51% of U.S young adults bank online” (12). It shows the young adults are the lead of the Internet users. The users of online banking have grown from 18% to 61%, and the users of mobile banking have also grown from 18% to 35 % (12). Young adults are leading the mobile and online banking trends, because they have experienced the benefit and conveniences of banking through web. “In 2012, 39% of U.S adults said they prefer to bank online (up from 36% in 2010) and 6% said they prefer to bank on a mobile device (up from 3% in 2010)” (12). Data has shown that the increases of adults between the ages of 19 -34 year old are driving the growth in both online and mobile banking.

**Comparison 4: Payments methods used in online shopping vs shopping in retail stores for Chinese college students living in the US**



Figure 15. Payments methods used in online shopping vs shopping in retail stores for Chinese college students living in the US

99 of 197 respondents use credit card for online shopping. For online shopping, there are 53 of 197 respondents use PayPal. On the other hand, 98 of 209 respondents use credit card for retail stores shopping. 60 of 209 respondents use cash for retail stores shopping.

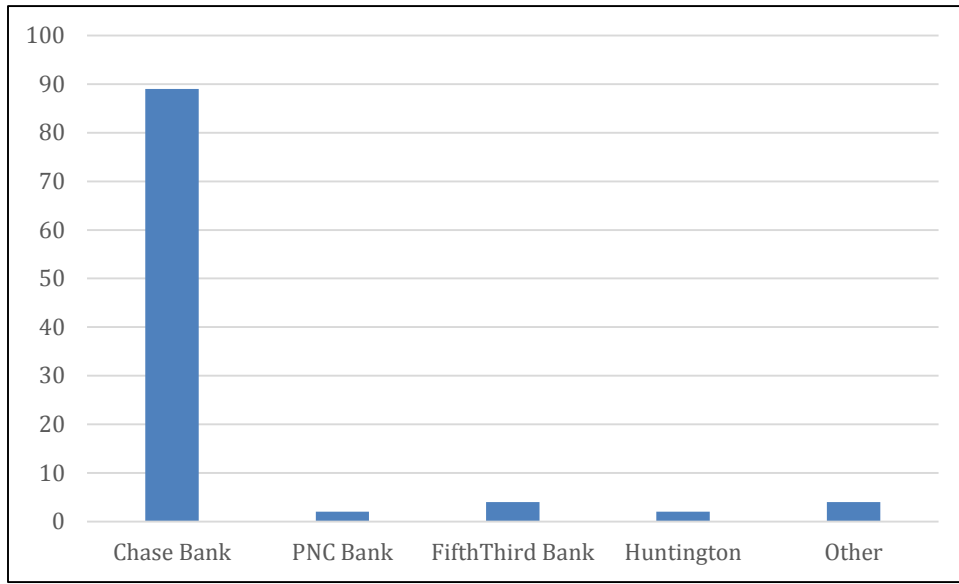


Figure 16. Banks used most among Chinese college students living in the US

For Chinese college students living in the US, 88% of the participants used Chase Bank when they shop online. Besides the banks we listed, they also use Discover, American Express, and other international banks for online shopping.

From my analysis, you can see that Chase Bank earned the most market share in Chinese college students who living in Columbus Ohio area. For my survey, there are 106 Chinese college participants, who on average spend \$450.48 for online shopping monthly, and \$656.23 for retail stores shopping monthly. Chase Bank's market share for Chinese

college students who living in Columbus Ohio area every year is

$106 * (\$450.48 + \$656.23) * 12 * 88\% = \$1,238,807$ . The reason Chase Bank earns so much

market share each year is that their mobile banking is really convenient, such as the

quickpay function. And also, Chase Bank gives a lot of cash back to their customers on

purchases. So other banks should think about some improvements on their convenience

services and provide more rewards to customers in order to gain more market share.

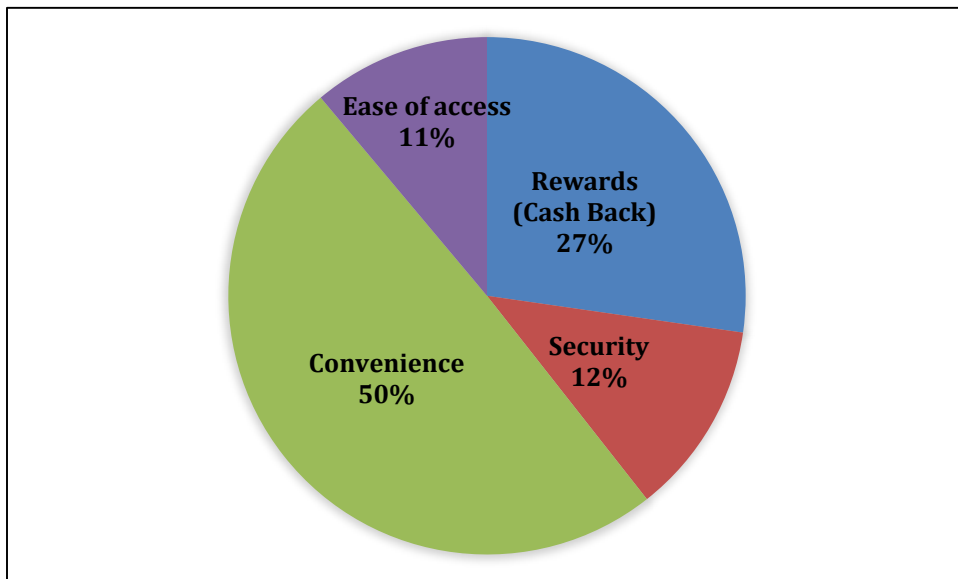


Figure 17. Most important reason for choosing banks for Chinese college students living in the US

50% of Chinese college students living in the US chose “convenience” as their most important reason for choosing banks. “Rewards” also play as an important factor for making decisions. 27% of our respondents chose “rewards” as their most important reason for choosing banks.

Otherwise, security is also an important reason that has to be considered when choosing banks. No one will forget the 2013 Target information stolen. Millions of U.S. customers had their financial information and personal data stolen due to a security breach at Target. The breach at U.S. retailer Target, taking place in November 2013, resulted in the theft of at least 40 million customer records containing financial data such as debit and credit card information. In addition, roughly 70 million accounts were compromised that included addresses and mobile numbers.

According to Elsevier Science research, many people were less likely to respond to emails and surveys from financial firms. The firm Crypto interviewed 1678 adults about the term of security of online banking and noted “69% of respondents believed banks

should replace username and password login with stronger authentication.” (13) Few people were likely to respond to the email from bank because of concerns about spam or phishing. While banks typically offer secure web pages to conduct business transactions, this doesn’t guarantee complete safety.

Meanwhile, the security of online banking affects online shopping. Most people prefer to shop online because searching a product online is fairly easy, prices tend to be lower, and the process is relatively less time consuming. However, as online shopping has become more common, the number of the online scams and frauds are increasing as well. Likewise, the unsecure protection of personal information is becoming a huge concern of all consumers. Last, nearly half of respondents in the survey said “they would appreciate it if they could use the authentication token to log in to other websites in addition to their online banking site.” (13). Therefore, people will regain trust if banks could improve their authentication system and enhance the quality of online shopping regarding safety of payment.

Through my survey result, “convenience” is listed as the first important reason for choosing banks for Chinese college students living in the US. From this point, I tried to find opportunities to make payment more convenient for them. I and my friend Xuanlin Yang generated a SmartCase business plan. SmartCase is an innovative way to pay and integrate, ultimately replace unorganized traditional cards (credit/debit cards, membership cards, ID cards, etc.). With a regular credit card size device, which is equipped with a rewritable magnetic strip, carried by a smartphone case together with a powerful mobile app, user can load all the information of various cards onto smartphone.

SmartCase has three components, the portable card, the phone case, and the mobile app. To use it, user needs to load information or any given card that has Bar code, QR code, or magnetic strip through the reader or the built-in smartphone camera into the app that is installed on mobile device. Through the app, user can then manage, select, and transmit information of specific cards into the portable card that is equipped with a rewritable magnetic strip via Bluetooth. The case serves as a holder to keep the portable



card and smartphone together. Upon paying, user can either push the portable card partially out and swipe, or push it entirely out and swipe or insert after the data is loaded.

For more information about SmartCase business plan, please refer to Appendix:

SmartCase Business Plan.



Figure 18. SmartCase

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## Appendix: SmartCase Business Plan



# Smart Case Business Plan

**Advisor:**

Bruce Barnes

**Team Members:**

Chenyin Wang

Daini Li

Jingyi Zhou

Jinjin Shao

Rui Wu

Shuai Wang

Xuanlin Yang

Yuxuan Wang

Yongjia Duan



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## Executive Summary

*SmartCase* is an innovative way to pay and integrate, ultimately replace unorganized traditional cards (credit/debit cards, membership cards, ID cards, etc.). With a regular credit card size device, which is equipped with a rewritable magnetic strip, carried by a smartphone case together with a powerful mobile app, user can load all the information of various cards onto smartphone and push to the portable card-shape device freely.

Our target customers are people aged from 20 to 50 who are technology savvy, use smartphone on a daily basis, and pay with cards for the majority of the spending. According to the research, this group of people carries 14 cards with them daily, which creates a large demand on our product. Based on the forecast, we will be able to accumulate 2.7M users after the first year of operation by December 2016.

To reach the market, we will start by cooperating with *Alliance Data System*<sup>1</sup>, who provides loyalty program support to major retailers across the country. By leveraging their existing relationships with retailers, we will be able to smoothly educate retailers on this new type of payment method. On the other hand, customers will have less resistance trying this device with their membership card first.

There are two existing companies, *Coin*<sup>2</sup>, *Plastc*<sup>3</sup>, preordering similar products as we have in the market, but *SmartCase* has more powerful features and an extremely competitive price. Unlike *Apple Pay*<sup>4</sup> with lots of limitations, *SmartCase* could potentially replace all kinds of cards and is compatible with all kinds of smartphones. Although

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<sup>1</sup> <http://www.alliancedata.com/>

<sup>2</sup> <https://onlycoin.com/>

<sup>3</sup> <https://www.plastc.com/card>

<sup>4</sup> <https://www.apple.com/apple-pay/>



we are generally moving to *Near Field Communication*<sup>5</sup>, major retailers will still keep printing physical cards based on cost concerns for a sufficiently long time, which leaves *SmartCase* another blue sea to thrive.

With initial launch starting at January 2016, we are looking for a break-even point by July 2017. The forecast net income for 2017 fiscal year is 10M, and the total user is 3.24M. The total capital needed to reach break-even point is 1.3M.

Given unique advantages including the permission of having separate classes of stock, allowing for the creation of various levels of preferences, protections, and share valuations as well as the easiest type of entity to take public in an initial public offering, we plan to register our company as a C type corporation.

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<sup>5</sup> [http://en.wikipedia.org/wiki/Near\\_field\\_communication](http://en.wikipedia.org/wiki/Near_field_communication)





## Business Overview

### Business Opportunity:

Based on the research conducted by *Nilson Report* <sup>6</sup>, a leading newsletter company covering the payment system industry, American adults, on average, carry 14 different kinds of cards with them on a daily basis. These cards bring us three issues:

- Hard to carry – 14 cards has a thickness that is equivalent to roughly 2 iPhone 5s
- Hard to organize – it takes a long time to get the card you want and one could easily forget to bring a specific card with them
- Related consumption data is not properly integrated and being used to create value

To solve these issues, we invent *SmartCase* to integrate all cards into a single place. *SmartCase* has three components, the portable card, the phone case, and the mobile app. To use it, user need to load information or any given card that has Bar code, QR code, or magnetic strip through the reader or the built-in smartphone camera into the app that is installed on mobile device. Through the app, user can then manages, selects, and transmits information of specific cards into the portable card that is equipped with a rewritable magnetic strip via Bluetooth. The case serves as a holder to keep the portable card and smartphone together. Based on the research, most smartphone users keep the phones with them all the time. Therefore, by attaching the card to the phone through protection case, user can access the card all the time in a very convenient way. Upon paying, user can either push the portable card partially out and swipe, or push it entirely out and swipe or insert after the data is loaded.

### Current development status:

For the next 3 years, we plan to only targeting the domestic market of the United States. We will adjust the plan accordingly based on future performance. Right

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<sup>6</sup> [http://www.nilsonreport.com/publication\\_chart\\_and\\_graphs\\_archive.php](http://www.nilsonreport.com/publication_chart_and_graphs_archive.php)



now, we have finished the design of the prototype and have printed it out through a 3D printer. As to the app, we have finished all the UI design and our engineers are developing on both IOS as well as Android platform. The IOS version is 30% done, and the Android version is 55% done. For more information on our prototype and apps, please refer to Appendix on page 14 and 15.

### Target Customers:

*SmartCase* is considered as a very innovative product and thus requires users to be:

- Technology savvy (they need to be willing / tech-literate to operate the app and load cards around), and using smartphone regularly
- Open minded to this new form of payment method (get rid of any sort of physical cards)
- Have sufficiently large amount of cards (14 cards) and shop with cards regularly

Based on these constraints, we target our customer as the group of people aged from 20 to 50 years old. Research shows that they are relatively technology savvy and majority of them use smartphones on a daily basis, especially the younger generation (20 – 35 years old). In addition, about 90% of our target customers use cards to make payments. Given our competitive advantages (please refer to figure on page 4 under

marketing plan), we forecast that the number of user we could accumulate is as follow (starting at Jan. 2016, the time of our initial launch of the product):

2016/12	2017/12	2018/12	2019/12
2.7M	3.24M	3.56M	3.92M

Based on the latest *2014 American Demographic Census*<sup>7</sup>, the total population aged from 20 to 50 years old is about 120M, as mentioned before, 90% of them shop with cards regularly and have access to smartphones. *Rogers Consumer Adoption Curve*<sup>8</sup> suggests a convert rate of 5%, and that gives the forecast number of user by the end of 2016. We assume a 20% increase rate on number of user in 2017 and 10% in subsequent years.

## Marketing Plan

### Market Research:

We consider *SmartCase* as an information integration product with an initial focus on payment solution, and more specifically, a product to replace traditional physical cards that are essentially used on ID verification. *Coin* and *Plastc* are the two competitors in this industry, and both of them are preordering their products that are very similar to ours. However, unlike our competitors, whose products integrating all the technology/components into one card that works like an independent electronic devise, we decided to design our product into a phone case that leverages existing components coming with the smartphone. This unique design decreases our production cost dramatically and helps us gain a huge competitive advantage on low price. According to the research conducted by *Nilson Report*, smartphone users are more aware of their

<sup>7</sup> <http://www.census.gov/topics/population.html>

<sup>8</sup> [http://en.wikipedia.org/wiki/Technology\\_adoption\\_lifecycle](http://en.wikipedia.org/wiki/Technology_adoption_lifecycle)



phones than anything else, and they carry their smartphones all day long. Our unique design of the *SmartCase* can provide users a much more convenient way to carry the card, so they don't have to worry about their wallets anymore. In addition, based on the survey we conducted, 60% of the smartphone users purchase phone case for protection purpose. Thus, we also added protection function to our *SmartCase* design.

	Physical Card	Coin	Plastic	<i>SmartCase</i>	Regular phone Case
Price	Free	75	155	29.99	15~35
Support QR code	No	No	Yes	Yes	No
Support Bar code	No	No	Yes	Yes	No
Eliminate extra cards	No	Yes	Yes	Yes	N/A
Provide extra protection	No	No	No	Yes	Yes
Security <sup>9</sup>	Low	Low	Medium	High	N/A
Carried all day	No	No	No	Yes	Yes
Max card stored	N/A	10	10	Infinite	N/A

#### Advantages *SmartCase* has over *Apple pay*:

- *SmartCase* can replace all kinds of cards, not limited to bankcards. Major retailers will continue printing physical cards that do not have NFC chip, which could not be substituted by Apple pay, due to cost saving
- *SmartCase* is cheaper and compatible with any smartphones. Apple pay, however, requires users to purchase iPhone 6+ or a higher version

#### Marketing Strategy:

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<sup>9</sup> SmartCase will not upload user data into central repository without consent, so for most of the time, the sensitive will be absolutely safe unless user lost their phone, and someone could break both the passcode to unlock the phone as well as the log in credential to our app



Given that *SmartCase* is a very innovative product and requires users to be open minded as discussed before, we are now negotiating with a company called *Alliance Data System* (ADS). ADS operates loyal program and provide private label as well as co-branded credit cards for retailers, including *Dell*, *Victoria's Secret*, *Meijer*, *Game Stop*, and etc. across the country. *SmartCase* will store all the sensitive financial information on the mobile device and it is reasonable for users to have concerns of using it. By cooperating with ADS, we will be able to allow customer to try *SmartCase* with their loyalty/membership cards, which they will tend to have less resistance. Once familiar with the product, they are more likely to move their bankcards onto it as well. Also, most of the customers of ADS's clients are female, who shops a lot and thus tends to have multiple cards. They are considered as perfect potential customers of *SmartCase*. Last but not least, by leveraging ADS's existing relationship with these retailers, it is easier for us to educate retailers/merchandizers to accept such a payment method, and at the end of the day, retailers are of consumers.

For ADS, this cooperation allows them to save money on printing physical cards, moreover, but help their customer organize, integrate these membership cards, they now have a better chance to being the membership card with them while shopping, which helps ADS to collect more user data, as well as a better chance to charge financial fees. The majority revenue of ADS comes from the various financial fees generated by the private label credit card (e.g. Interest fee), and a major problem they are facing right now is that customers easily forget to bring and pay through their card, because they have so many cards!

We will sell our products through appropriate retailers, including major mobile



carriers and all level of retailers. Based on the research, mobile carriers, such as AT&T, appose a mark up of about 40 percent on a regular smartphone protection case and sell them at around 12 dollars, whose production cost is only 6 dollars. Given this fact, we decide to give all the profit to retailers and make no money from the sale of the device in order to generate more sales with a relatively low price. Our production cost is \$18.00, and we plan to sell it at \$29.99. For detail information about production cost, please refer to table in Appendix on page 13.

### **Startup Team**

#### **Bruce Barnes, Advisor**

Mr. Barnes has nearly forty years of experience at the senior technology officer level within multiple industry sectors, including successful leadership roles at the Fortune 100 level. In addition to his role at the Fisher College of Business, he is currently the CEO of BOLD VISION®, a recognized senior consulting consortium comprised of former CIOs and other “C Level” executives.

#### **Xuanlin Yang, President**

Xuanlin is currently a junior pursuing dual degree in Management and Information Systems and Computer and Information Science, as well as a recipient of the Wheeler Entrepreneurial Scholarship. With outstanding performance in several top case competitions sponsored by Deloitte and other industry leaders, he is able to fill up the gap between technology and business, as well as commercialize innovative ideas.

#### **Yuxuan Wang, VP of Marketing**

Yuxuan is a senior double majoring in Finance and Marketing. She is also expected to Graduation with Honor Research Distinction. She has been keeping a 3.9 GPA, doing research, working as a part-time marketing research analyst at the same time. On the team, she provides a distinct view from the marketing side.

#### **Rui Wu, VP of Operation**

Rui is currently a senior student majoring in Marketing with a design minor. She is in the Honors Contract Program with a 3.95 GPA. She also works as an international host captain who leads the international hosts program. On the team, she sets up the plan of future development and is also in charge of UI design.

#### **Yongjia Duan, VP of Finance**

Yongjia is a junior majoring in Accounting with Economics minor. She also serves as director of accounting in CSSS, which is the largest Chinese student organization in Mid Ohio. With past experience interning at Merchant Bank of China, she helps the team to laydown a robust financial roadmap.

#### **Shuai Wang, VP of Technology**

Shuai is a senior double majoring in Electrical and Computer Engineering. He is also a member of Engineering honor program. He has developed Android App and web



application for more than a year. On the team, he leads the entire developing process.

**Jingyi Zhou, Senior Electrical Engineer**

Jingyi is a master student majoring in Electrical and Computer Engineering. She is also a member of College of Engineering honor program. She has been doing 3D animation and medical treatment game design for the past year. On the team, she is leading the developing and designing of the electric circuit.

**Jinjin Shao, Senior Computer Science Engineer**

Jinjin is junior majoring in Computer Science and Engineering. He is also an active member of OSU Mobile App Club. He has great passion on IOS app developing, and serves as senior computer science engineer focusing on developing the IOS version app.

**Chenyin Wang, Director of Supply Chain Management**

Chenyin is a junior double majoring in Logistic and Operational Management. She is also a member of Undergraduate Business Council. With experience in serving supply chain expertise in several business competitions, Chenyin assist the team on designing mature, cost-efficient supply and distribution channel to reach target customer.

**Daini Li, Legal Counsel**

Daini is a LLM Graduate of Northwestern University School of Law. She also has a LLB degree (JD equivalent) from Wuhan University School of Law, China. She has experience in assisting lawyers with legal research, drafting and proofreading legal

documents in the area of FDI, M&A, and International Arbitration in both China and U.S.

**Future Growth:**

Due to the limitation of current talents in some specific fields, we are planning to hire more experienced technical as well as marketing professionals. These are also two key components given the current business model of *SmartCase*. Additional after-sale customer service assistants are also needed. All of these professionals will be hired starting June 2015, given our goal of starting preordering around December 2015. We forecast a growth rate of 20% in 2017, and 10% for subsequent year, thus the budgeting for salaries is adjusted accordingly. Please refer to Key personnel Hiring tables on page 13 for more information.

## Financial Plan

### Funding Requirements:

Based on our forecast, the business will break even on July 2017, two years after the first day operation. Before that, the entire capital needed will come from the investment. The total capital required is \$13,131,653.25. One of our competitors raised a starting fund of 1.2M. The net income for first 4 fiscal years is as follow:

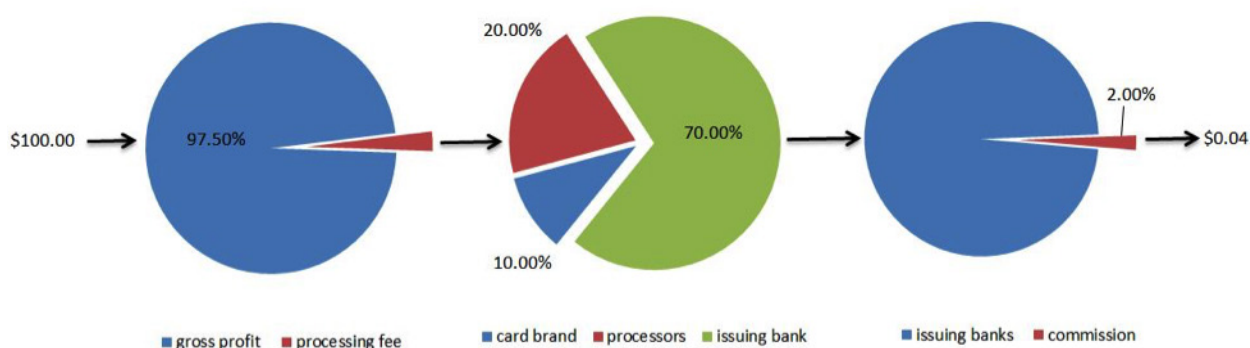
2015/6-2016 <sup>10</sup>	2017	2018	2019
\$-2310629	\$10092484.83	\$12806289.95	\$16167006.47

For details on how the fund is spent, please refer to income statement in Appendix.

### Revenue model:

The existing revenue model has three parts:

- Premium account fee:  
User will be charged 1 dollar per additional card per year after the tenth card.
- Processing fee:  
In America, about 2.5% of the total transaction amount on credit card will be charged as processing fee. Among that 2.5%, 70% goes to issuing banks that issued the card. We plan to charge banks 2% of that 70% they get, which equals to approximately 4 cents per 100 dollars.



The *SmartCase*, in theory, will increase user experience, which would potentially lead to an increase of the proportion of transaction finished through cards. Such an increase will bring all parties (Processor, Card Brands, Issuing banks) more profits, especially to

<sup>10</sup> We won't make money from processing fee, which the largest part of the entire revenue stream, until 2017/1, so we combine 2015 and 2016 into one fiscal year



Processors and Card Brands because one of the major threats they are facing is the competition from third party payment platform, such as PayPal, and Alipay by Alibaba. Besides, since *SmartCase* will not charge users, Processors as well as Card Brands any additional fees, they, in theory, would love to support *SmartCase*. With their support and a sufficiently large user base, we will have the bargaining power to negotiate with banks on sharing processing fees.

	Users	Processors	Card Brands	Issuing Banks
<b>Benefits</b>	Better user experience	Increasing profit	Increasing profit	Increasing profit; Decreasing cost by issuing card electronically onto <i>SmartCase</i>
<b>Loss</b>	None	None	None	Lose 2% of the processing fee
<b>Response</b>	Pay with <i>SmartCase</i>	Accept <i>SmartCase</i> as a payment method	Authorize <i>SmartCase</i> to load card information	Compromise and share processing fee

- Professional Service:

With the consent from our users, we will provide third parties professional services by analyzing and sharing data collected from users. For example, with the geo-information collected through smartphones, we will be able to predict when and where (from which retailers) does the user consume. Please refer to Appendix for our user agreement on data release on page 14.

### Key Milestones:

- June 2015 - Hire experienced engineers and marketing director
- October 2015 - Test engineer machine and preorder
- January 2016 – Initial offer for sale
- June 2016 – Accumulate 1.35M users and start to negotiate with financial institutions
- January 2017 - Start to share processing fee with financial institutions
- July 2017 - Break even
- December 2019 – Reshape business model and focuses on building virtual payment & ID verification platform

### Cash flow:

Based on our forecast, we will reach the break even point by July 2017, for detailed cash flow statement, please refer to Appendix on page 12.



## About the future and Exit Strategy:

As we mentioned above in marketing plan, the *Near Field Communication* technology, or NFC, will take over about 60% of the total payment market by 2017 through mobile devices. Given this trend, we will drop of the hardware market by the end of 2019 and focuses on building a mature, integrated virtual payment as well as ID verification platform upon the build-in *Near Field Communication* chip from smartphones.

To be specific:

- ID Verification Platform:

As the technology advancing and deep relationship forming with merchandizers as well as authorities, we will integrate IDs into the mobile app. The definition of IDs includes but no limited to:

- Photo IDs (driver license, passport)

- Badgers

- Key cards (hotel room card, access card)

After the integration, all verifications that are traditionally performed with these physical cards listed above will be substituted by *SmartCase* (more precisely, the app that stores all the information and leverages the NFC chip to present it).

- Virtual Payment Platform:

As mentioned before, NFC is gradually becoming the main payment method in the next couple years, and as a response to it, major brands are all developing or even have already deployed apps in this field. According to survey result, people are, on average, installing 34 apps on their phones, and as merchandizers publishing their own apps, there will be increasing demand on an integrated payment platform/app.

With a sufficiently large user base and a well-built brand, we will be able to transform and upgrade our existing app into such a desired integrated platform. As a result, *SmartCase* will be able to control the entrance of most virtual transactions happening on mobile devices.

Given the forecast on our future development pace, we plan to initiate the IPO around early 2020.



## Appendix

SmartCase, C Corp. Income Statement					
Year		2015/6~2016	2017	2018	2019
<b>REVENUES</b>					
	Processing fee	\$ -	\$ 16,067,538.67	\$ 20,024,973.44	\$ 24,957,124.40
	Premium Account	\$ 540,000.00	\$ 108,000.00	\$ 64,800.00	\$ 71,280.00
	Upfront Sale	\$ 80,973,000.00	\$ 16,194,600.00	\$ 9,716,760.00	\$ 10,688,436.00
	User Data	\$ 135,000.00	\$ 27,000.00	\$ 16,200.00	\$ 17,820.00
<b>Total Revenue</b>		<b>\$ 81,648,000.00</b>	<b>\$ 32,397,138.67</b>	<b>\$ 29,822,733.44</b>	<b>\$ 35,734,660.40</b>
<b>EXPENSES</b>					
<b>Operating Expenses</b>					
	Cost of Goods Sold	\$ 80,973,000.00	\$ 16,194,600.00	\$ 9,716,760.00	\$ 10,688,436.00
	Accounting and Legal <sup>1</sup>	\$ 7,500.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00
	Advertising	\$ 450,000.00	\$ 300,000.00	\$ 200,000.00	\$ 200,000.00
	Insurance <sup>2</sup>	\$ 4,500.00	\$ 3,000.00	\$ 3,000.00	\$ 3,000.00
	Maintenance and Repairs	\$ 3,000.00	\$ 2,000.00	\$ 2,000.00	\$ 2,000.00
	Office Supplies	\$ 6,000.00	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00
	Payroll Expenses	\$ 3,000.00	\$ 2,000.00	\$ 2,000.00	\$ 2,000.00
	Postage	\$ 4,500.00	\$ 3,000.00	\$ 3,000.00	\$ 3,000.00
	Rent <sup>3</sup>	\$ 41,829.00	\$ 33,463.20	\$ 36,809.52	\$ 40,490.47
	Research and Development	\$ 450,000.00	\$ 200,000.00	\$ 200,000.00	\$ 200,000.00
	Salaries and wages <sup>4</sup>	\$ 1,459,800.00	\$ 1,167,840.00	\$ 1,284,624.00	\$ 1,413,086.40
	Telephone	\$ 6,000.00	\$ 4,800.00	\$ 5,280.00	\$ 5,808.00
	Travel	\$ 15,000.00	\$ 12,000.00	\$ 13,200.00	\$ 14,520.00
	Utilities	\$ 15,000.00	\$ 12,000.00	\$ 13,200.00	\$ 14,520.00
	Web Hosting <sup>5</sup>	\$ 4,500.00	\$ 3,600.00	\$ 3,960.00	\$ 4,356.00
	Other	\$ 10,000.00	\$ 8,000.00	\$ 8,800.00	\$ 9,680.00
<b>Total Operating Expenses</b>		<b>\$ 83,453,629.00</b>	<b>\$ 17,955,303.20</b>	<b>\$ 11,501,633.52</b>	<b>\$ 12,609,896.87</b>
<b>Non-Recurring Expenses</b>					
	Furniture, Equipment and Software <sup>6</sup>	\$ 500,000.00	\$ 20,000.00	\$ 22,000.00	\$ 24,200.00
	Other	\$ 5,000.00	\$ 4,000.00	\$ 4,400.00	\$ 4,840.00
<b>Total Non-Recurring Expenses</b>		<b>\$ 505,000.00</b>	<b>\$ 24,000.00</b>	<b>\$ 26,400.00</b>	<b>\$ 29,040.00</b>
<b>Total Expenses</b>		<b>\$ 83,958,629.00</b>	<b>\$ 17,979,303.20</b>	<b>\$ 11,528,033.52</b>	<b>\$ 12,638,936.87</b>
	Net Income Before Taxes	\$ (2,310,629.00)	\$ 14,417,835.47	\$ 18,294,699.92	\$ 23,095,723.53
	Income Tax Expense	\$ -	\$ 4,325,350.64	\$ 5,488,409.98	\$ 6,928,717.06
<b>NET INCOME</b>		<b>\$ (2,310,629.00)</b>	<b>\$ 10,092,484.83</b>	<b>\$ 12,806,289.95</b>	<b>\$ 16,167,006.47</b>

All the revenue are calculated by assuming that by 2017, 60% of the transaction on card is through credit card; among that, 5% are through the platform of SmartCase and its competitor, and SmartCase will capture 33% of the market, since there are only three existing companies in this field. Among the total 2.5% transaction fee, SmartCase will be able to charge 2% on the 70% that banks earned. The monthly result is adjusted based on Rogers Consumer Adoptive Curve and US 2014 Consumer Monthly Spending Curve.

1. The registration fee is based on the rate of Ohio, which is \$175
2. The insurance is based on the quote of general small business
3. The rent is based on the rate of Dublin area, and an average space of 135 sqft per person. The space is increased by 20%, 10% and 10% per year starting 2017





- ## Cashflow Statement

SmartCase, C Corp.

Cash Flow Statement

Year												
Month	2024		2025		2026		2027		2028		2029	
Operating Activities		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Cash collected from customers		\$ 3,855,026.22	\$ 4,080,345.69	\$ 4,730,282.26	\$ 5,176,078.84	\$ 6,334,104.62	\$ 9,201,048.57	\$ 9,313,718.31	\$ 9,313,718.31	\$ 9,650,822.26	\$ 7,901,215.42	\$ 6,336,474.89
Cash paid to suppliers		\$ 4,046,632.50	\$ 4,691,175.09	\$ 5,133,282.26	\$ 6,281,729.34	\$ 9,126,315.97	\$ 9,236,715.97	\$ 9,236,715.97	\$ 9,236,715.97	\$ 8,975,997.42	\$ 7,235,984.52	\$ 7,564,011.52
Cash paid as other expenses		\$ 248,802.42	\$ 248,802.42	\$ 248,802.42	\$ 248,802.42	\$ 248,802.42	\$ 248,802.42	\$ 248,802.42	\$ 248,802.42	\$ 248,802.42	\$ 248,802.42	\$ 248,802.42
Net Increase (decrease) in cash		\$ -440,608.70	\$ -859,612.82	\$ 651,007.24	\$ 1,354,462.91	\$ 3,039,679.50	\$ 284,473.82	\$ 171,804.08	\$ -	\$ -	\$ -	\$ -
Accumulative net cash flow		\$ -440,608.70	\$ -1,309,225.52	\$ -658,218.28	\$ 723,762.37	\$ 3,039,679.50	\$ 3,324,146.32	\$ 3,495,950.40	\$ 3,495,950.40	\$ 3,495,950.40	\$ 3,495,950.40	\$ 3,495,950.40
Financing Activities		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Cash inflow from venture capital		\$ 440,608.70	\$ 859,612.82	\$ 651,007.24	\$ 1,354,462.91	\$ 3,039,679.50	\$ 284,473.82	\$ 171,804.08	\$ -	\$ -	\$ -	\$ -
Net increase (decrease) in cash		\$ -440,608.70	\$ -859,612.82	\$ 651,007.24	\$ 1,354,462.91	\$ 3,039,679.50	\$ 284,473.82	\$ 171,804.08	\$ -	\$ -	\$ -	\$ -
Accumulative net cash flow		\$ -440,608.70	\$ -1,309,225.52	\$ -658,218.28	\$ 723,762.37	\$ 3,039,679.50	\$ 3,324,146.32	\$ 3,495,950.40	\$ 3,495,950.40	\$ 3,495,950.40	\$ 3,495,950.40	\$ 3,495,950.40
Operating Activities		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Cash collected from customers		\$ 1,529,637.21	\$ 1,619,049.74	\$ 1,876,930.36	\$ 2,053,818.15	\$ 2,513,311.60	\$ 3,650,887.30	\$ 3,695,593.57	\$ 3,695,593.57	\$ 3,591,278.95	\$ 3,135,126.05	\$ 2,540,309.22
Cash paid to suppliers		\$ 809,326.50	\$ 938,235.22	\$ 1,026,457.44	\$ 1,256,347.87	\$ 1,683,996.34	\$ 1,847,343.99	\$ 1,847,343.99	\$ 1,795,199.47	\$ 1,567,778.50	\$ 1,247,485.71	\$ 1,249,040.37
Cash paid as other expenses		\$ 148,725.27	\$ 148,725.27	\$ 148,725.27	\$ 148,725.27	\$ 148,725.27	\$ 148,725.27	\$ 148,725.27	\$ 148,725.27	\$ 148,725.27	\$ 148,725.27	\$ 148,725.27
Net Increase (decrease) in cash		\$ 571,585.44	\$ 532,089.25	\$ 701,547.66	\$ 648,745.01	\$ 680,589.99	\$ 1,654,818.04	\$ 1,699,524.30	\$ 1,751,668.83	\$ 1,875,974.78	\$ 1,738,905.07	\$ 1,077,034.32
Accumulative net cash flow		\$ -5,009,922.86	\$ -4,477,833.61	\$ -3,776,285.95	\$ -3,127,540.93	\$ -2,587,950.94	\$ -933,132.90	\$ 766,391.41	\$ 2,518,060.24	\$ 4,393,935.02	\$ 6,132,340.09	\$ 7,209,374.41
Financing Activities		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Cash inflow from venture capital		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net increase (decrease) in cash		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Accumulative net cash flow		\$ -5,009,922.86	\$ -4,477,833.61	\$ -3,776,285.95	\$ -3,127,540.93	\$ -2,587,950.94	\$ -933,132.90	\$ 766,391.41	\$ 2,518,060.24	\$ 4,393,935.02	\$ 6,132,340.09	\$ 7,209,374.41
Operating Activities		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Cash collected from customers		\$ 1,408,086.17	\$ 1,490,393.62	\$ 1,727,782.03	\$ 1,890,618.60	\$ 2,313,593.89	\$ 3,360,773.31	\$ 3,401,927.03	\$ 3,401,927.03	\$ 3,305,901.67	\$ 2,885,996.49	\$ 2,397,282.44
Cash paid to suppliers		\$ 485,995.90	\$ 565,941.13	\$ 615,994.46	\$ 753,808.72	\$ 1,094,997.80	\$ 1,108,406.40	\$ 1,108,406.40	\$ 1,077,115.68	\$ 940,307.34	\$ 748,497.43	\$ 914,287.32
Cash paid as other expenses		\$ 150,939.46	\$ 150,939.46	\$ 150,939.46	\$ 150,939.46	\$ 150,939.46	\$ 150,939.46	\$ 150,939.46	\$ 150,939.46	\$ 150,939.46	\$ 150,939.46	\$ 150,939.46
Net Increase (decrease) in cash		\$ 771,550.81	\$ 773,513.03	\$ 960,848.11	\$ 985,865.42	\$ 1,067,656.62	\$ 2,101,427.45	\$ 2,144,591.18	\$ 2,173,867.89	\$ 2,214,654.87	\$ 1,986,559.60	\$ 1,332,055.75
Accumulative net cash flow		\$ 9,913,720.45	\$ 10,687,233.48	\$ 11,651,091.59	\$ 12,635,957.01	\$ 13,704,613.63	\$ 15,806,041.08	\$ 17,948,632.26	\$ 20,122,490.15	\$ 22,337,145.02	\$ 24,323,704.62	\$ 26,255,770.38
Financing Activities		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Cash inflow from venture capital		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net increase (decrease) in cash		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Accumulative net cash flow		\$ 9,913,720.45	\$ 10,687,233.48	\$ 11,651,091.59	\$ 12,635,957.01	\$ 13,704,613.63	\$ 15,806,041.08	\$ 17,948,632.26	\$ 20,122,490.15	\$ 22,337,145.02	\$ 24,323,704.62	\$ 26,255,770.38
Operating Activities		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Cash collected from customers		\$ 1,140,718.95	\$ 1,275,842.67	\$ 2,070,289.51	\$ 2,265,400.48	\$ 2,772,220.52	\$ 4,025,594.16	\$ 4,076,310.02	\$ 4,076,310.02	\$ 3,961,249.02	\$ 3,458,103.69	\$ 2,802,009.40
Cash paid to suppliers		\$ 534,155.40	\$ 670,335.24	\$ 677,580.59	\$ 829,180.58	\$ 1,204,487.80	\$ 1,218,247.64	\$ 1,218,247.64	\$ 1,184,481.65	\$ 1,034,398.08	\$ 831,347.17	\$ 838,096.62
Cash paid as other expenses		\$ 162,541.74	\$ 162,541.74	\$ 162,541.74	\$ 162,541.74	\$ 162,541.74	\$ 162,541.74	\$ 162,541.74	\$ 162,541.74	\$ 162,541.74	\$ 162,541.74	\$ 162,541.74
Net Increase (decrease) in cash		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Accumulative net cash flow		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Financing Activities		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Cash inflow from venture capital		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net increase (decrease) in cash		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Accumulative net cash flow		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

\*Since we are cutting the selling price to compete with regular phone cases by leave all profit to suppliers/retailers, the unit cost is the same as the selling price, which is \$29.99. We also assume a cushion of 20%, and this occurred in December 2015, one month prior to or initial offer for sale.

### Key Personnel Hiring Roadmap

Type Of Expenditure			
Staffing		Count	Annual Salaries
Existing	Sales	2	\$ 40,000.00
	Accountant	1	\$ 45,000.00
	Attorney	1	\$ 20,000.00
	Designer	1	\$ 40,000.00
	Application Developer	2	\$ 50,000.00
	Logistic and Supply Management	1	\$ 40,000.00
Subtotal			\$ 325,000.00
New Hired	Application Developer	2	\$ 75,000.00
	Machanical Engineers	1	\$ 65,000.00
	Electrical Engineer	2	\$ 66,000.00
	Customer Service	2	\$ 45,000.00
	Marketing Director	1	\$ 80,000.00
Benefits			\$ 131,200.00
Total			\$ 973,200.00

\*We plan to hire an experienced marketing director, and the salary is estimated based on national average

\*The employee benefits are calculated as 20% of the total salary

\*For existing member, we are paying lower salaries but compensate them with equities

### Production Cost Break Down

Production Cost	
Components	Cost
Battery	\$ 2.00
Plastic/Connectivity	\$ 4.00
Assembly	\$ 2.00
Bluetooth	\$ 4.00
Curcuit	\$ 2.00
Processor	\$ 3.00
Rewrotable Magnetic Strip	\$ 1.00
Total	\$ 18.00

\*All the production cost is estimated based on the cost of iPhone 6 components



## User data disclosure

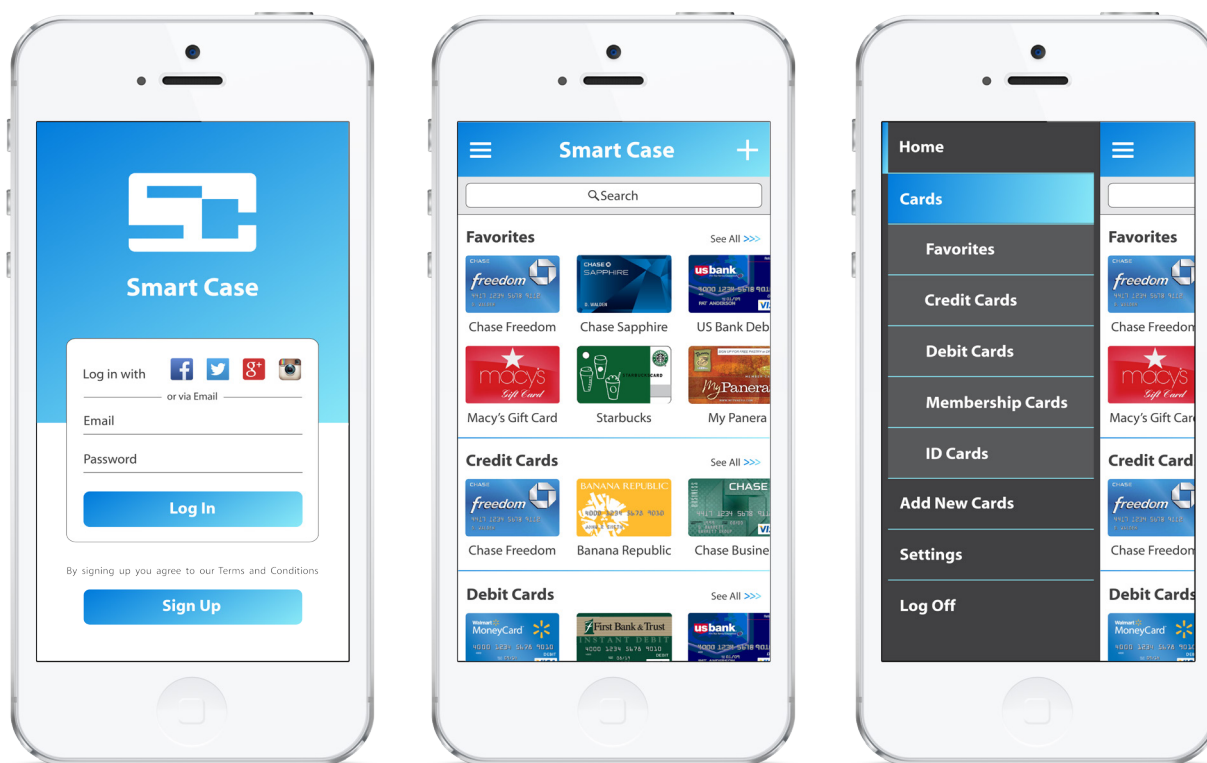
“When you use our Services, you are entering into a legal agreement and you agree to all of these terms.

.....

You also agree to our Privacy Policy, which covers how we collect, use, share, and store your personal and purchase history information.

- When you download or use our app, we may receive information about yourself, your purchase information via our mobile payment service, and your location, including a unique identifier for your device. We may use this information to provide you with location-based and individual-based services, such as advertising, financial security protection, and other personalized content. Most mobile devices allow you to turn off location services. For more information, please see the instruction of your mobile device(s).”

## Mobile App Design





## Phone Case Design

